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Panel I: The current landscape

Overview of FSB work on transforming shadow banking into resilient market-based finance

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Note: The views expressed in these slides are those of the author and do not necessarily reflect those of the FSB.

Defining the scope

FSB Report "*Shadow Banking: Strengthening Oversight and Regulation*" (Oct. 2011)

Shadow banking system can be broadly defined as the system of credit intermediation that involves entities and activities (fully or partly) outside the regular banking system.

Monitoring and policy responses are guided by a practical two-step approach:

- Firstly, authorities should cast the net wide, looking at all non-bank credit intermediation.
- Secondly, authorities should then narrow the focus for policy purposes to the subset of non-bank credit intermediation involving leverage and maturity/liquidity mismatching.

Source: http://www.fsb.org/wp-content/uploads/r_111027a.pdf

Transforming shadow banking into resilient market-based finance

The FSB has adopted a two-pronged approach to address risks posed by the shadow banking system.

1) **Establish system-wide monitoring frameworks at the national and global level**
   - FSB's annual monitoring exercise and other information-sharing initiatives.
2) **Develop policy measures to strengthen the oversight and regulation** of shadow banking to mitigate potential bank-like systemic risks, with specific focus on five areas:
   - (i) Mitigating risks in **banks' interactions with shadow banking entities**;
   - (ii) Reducing the **susceptibility of money market funds (MMFs) to "runs"**;
   - (iii) Improving **transparency and aligning incentives in securitisation**;
   - (iv) Dampening procyclicality and other **financial stability risks in securities financing transactions (e.g. repos, securities lending);** and
   - (v) Establishing a framework for **ongoing assessment and mitigation of financial stability risks posed by shadow banking entities and activities**.

Source: http://www.fsb.org/wp-content/uploads/shadow_banking_overview_of_progress_2015.pdf

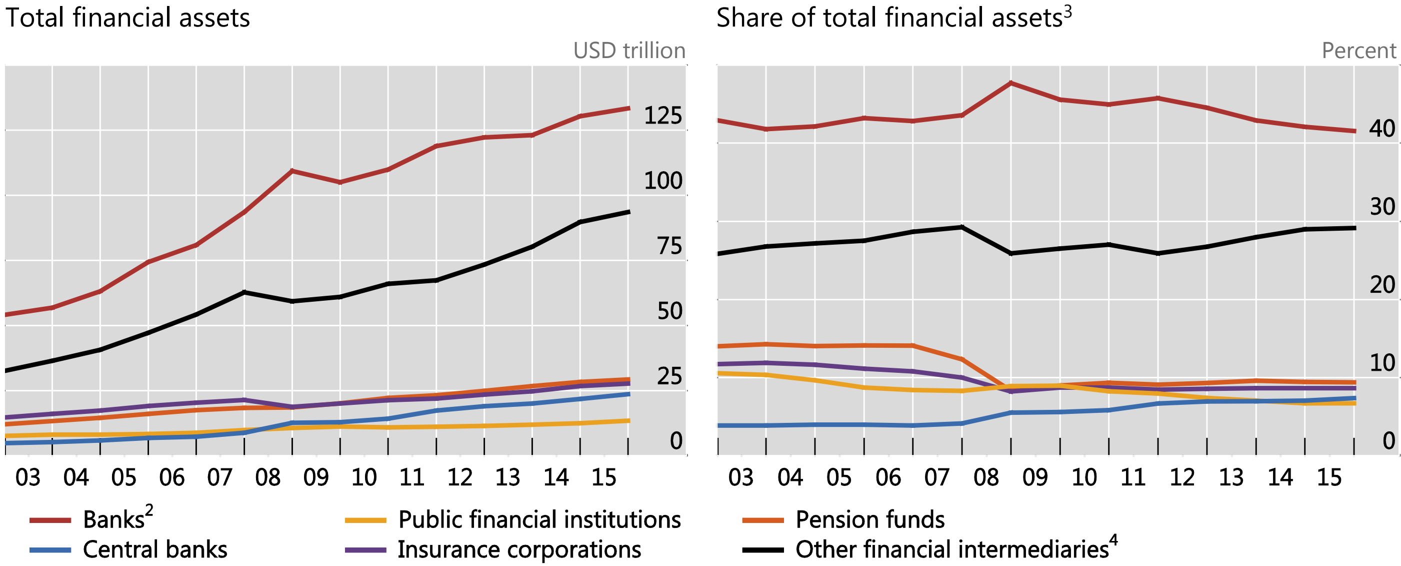
Assessing the global trends and structure of non-bank financial intermediation (1)

- The FSB's annual monitoring exercise covers about 90% of global financial system assets and includes many non-FSB member jurisdictions (including offshore financial centres).

Assets of financial intermediaries[1]

21 jurisdictions and the euro area

Exhibit 2-2



[1] Based on historical data included in jurisdictions' 2016 submissions. Exchange rate effects have been netted out by using a constant exchange rate (from 2015). [2] All deposit-taking corporations. [3] Weighted average based on total national financial assets. [4] Also includes captive financial institutions and money lenders, and, for presentation purposes, financial auxiliaries. Increases in the value of OFI assets may also reflect improvements in the availability of data for some OFI subsector over time at the jurisdiction level.

Sources: National sector balance sheet and other data; FSB calculations.

Source: http://www.fsb.org/wp-content/uploads/global-shadow-banking-monitoring-report-2016.pdf.

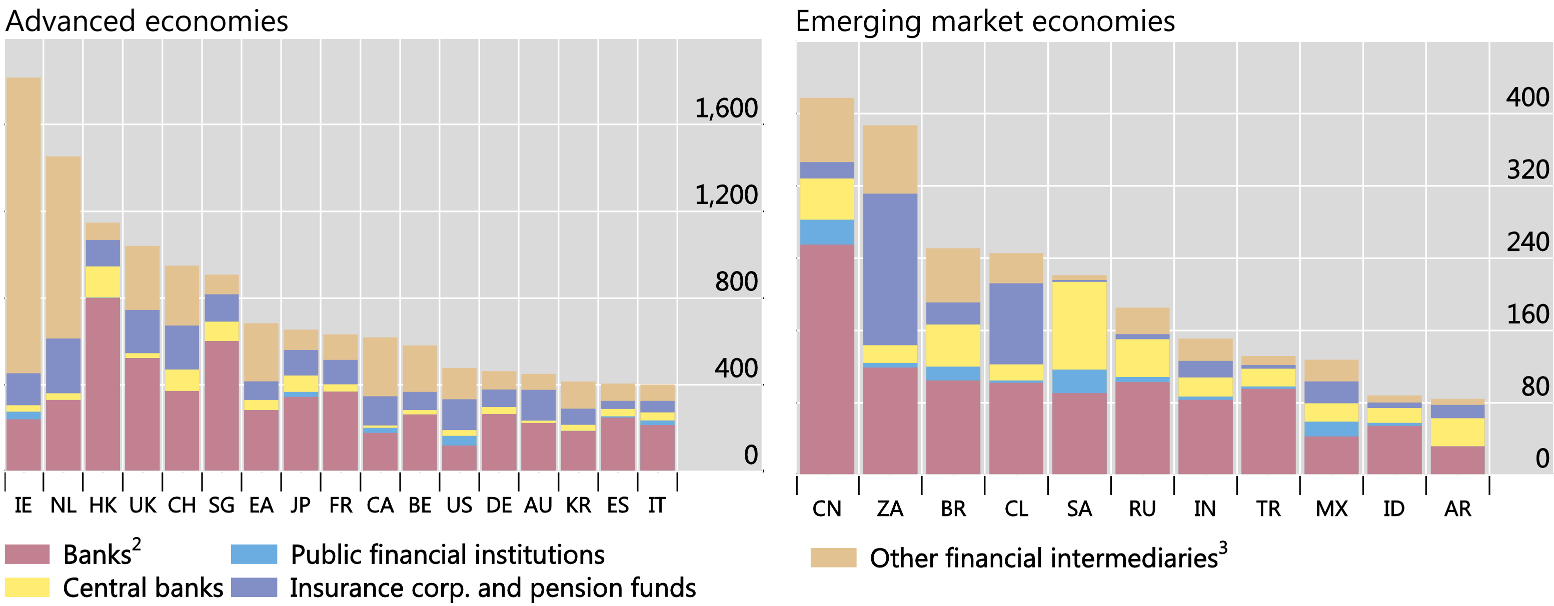
*: OFIs comprise all financial intermediaries that are not classified as banks, insurance companies, pension funds, public financial institutions, central banks, or financial auxiliaries.

Assessing the global trends and structure of non-bank financial intermediation (2)

Composition of financial systems[1]

Percent of GDP at end-2015

Exhibit 2-3



AR = Argentina; AU = Australia; BE = Belgium; BR = Brazil; CA = Canada; CH = Switzerland; CL = Chile; CN = China; DE = Germany; EA = Euro area as a whole; ES = Spain; FR = France; HK = Hong Kong; ID = Indonesia; IE = Ireland; IN = India; IT = Italy; JP = Japan; KR = Korea; MX = Mexico; NL = Netherlands; RU = Russia; SA = Saudi Arabia; SG = Singapore; TR = Turkey; UK = United Kingdom; US = United States; ZA = South Africa.

[1] Assets invested in foreign jurisdictions may distort these ratios. Data for the Cayman Islands are not represented in this graph – the size of the financial system was around 200,000% of GDP at end-2015. [2] All deposit-taking corporations. [3] Also includes captive financial institutions and money lenders, and, for presentation purposes, financial auxiliaries.

Sources: National sector balance sheet and other data; IMF *World Economic Outlook*; FSB calculations.

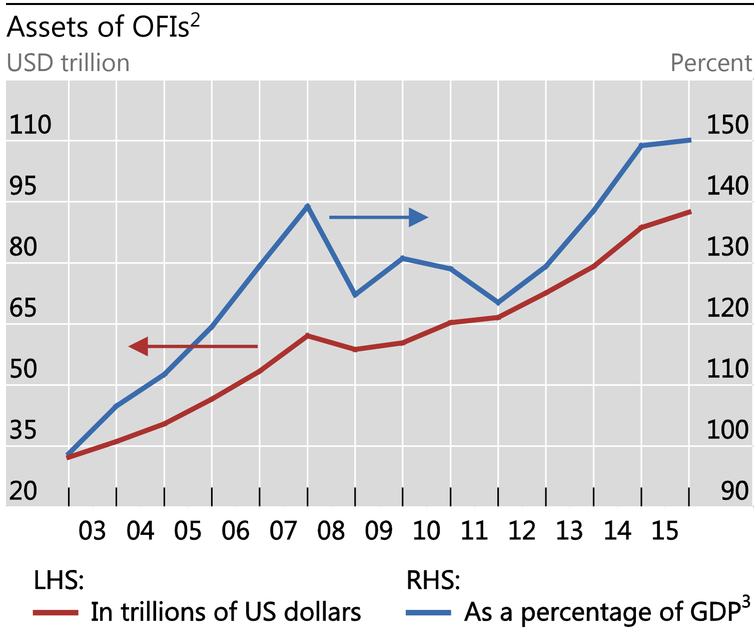
Source: http://www.fsb.org/wp-content/uploads/global-shadow-banking-monitoring-report-2016.pdf

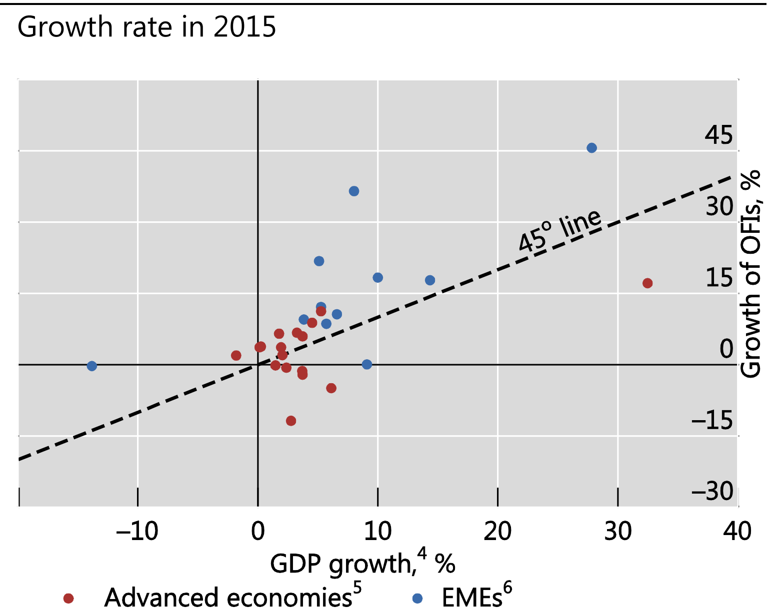
Assessing the global trends and structure of non-bank financial intermediation (3)

Other financial intermediaries (OFIs) compared to GDP[1]

21 jurisdictions and the euro area

Exhibit 2-7





[1] Also includes captive financial institutions and money lenders. Exchange rate effects have been netted out by using a constant exchange rate (from 2015). Based on historical data included in jurisdictions' 2016 submissions. [2] Increases in the value of OFI assets may also reflect improvements in the availability of data for some OFI subsectors over time at the jurisdiction level. [3] As a weighted average based on GDP weights. [4] Calculated from GDP figures in local currency based on current prices. Growth rates in two outlier jurisdictions are reflecting high inflation and one-off relocations of big economic agents. [5] Australia, Belgium, Canada, the Cayman Islands, France, Germany, Hong Kong, Ireland, Italy, Japan, South Korea, the Netherlands, Singapore, Spain, Switzerland, the UK and the US. [6] Argentina, Brazil, Chile, China, India, Indonesia, Mexico, Russia, Saudi Arabia, South Africa and Turkey.

Sources: National sector balance sheet and other data; IMF *World Economic Outlook*; FSB calculations.

Source: http://www.fsb.org/wp-content/uploads/global-shadow-banking-monitoring-report-2016.pdf

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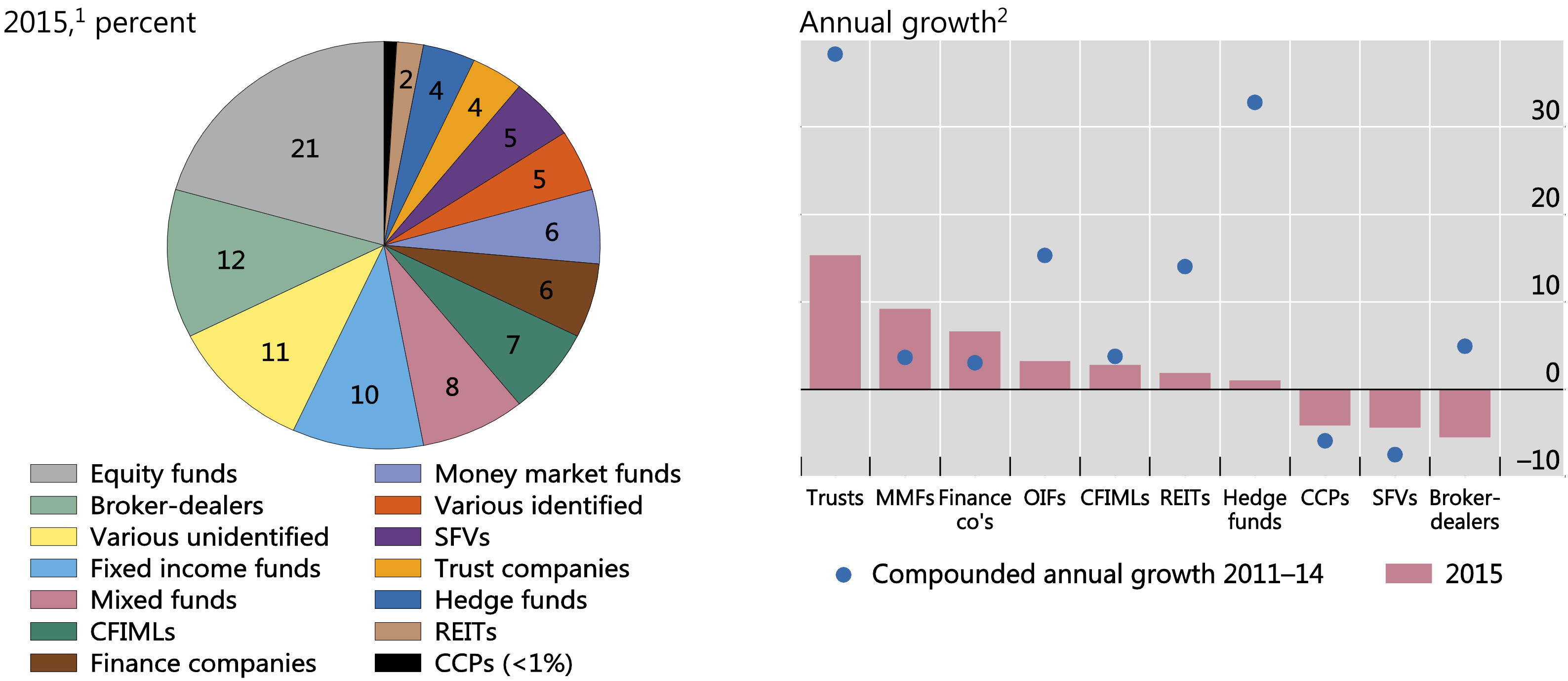
Assessing the global trends and structure of non-bank financial intermediation (4)

Major OFI subsectors

28 jurisdictions

Exhibit 2-11



CCPs = Central counterparties; CFIMLs = Captive financial institutions and money lenders; MMFs = Money market funds; OIFs = Other investment funds; REITs = Real estate investment trusts and RE funds; SFVs = Structured finance vehicles; Trusts = Trust companies;

[1] Various unidentified also includes central counterparties. [2] Based on jurisdictions' 2016 submissions. Exchange rate effects have been netted out by using a constant exchange rate (from 2015).

Sources: National sector balance sheet and other data; FSB calculations.

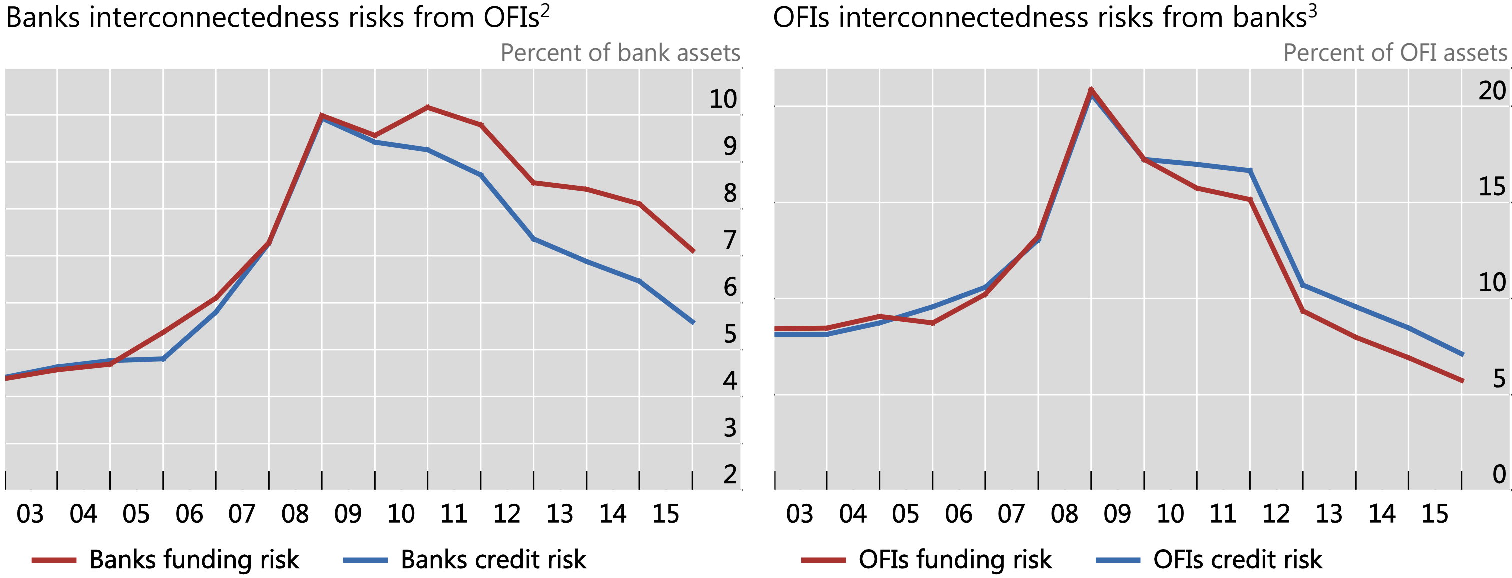
Source: http://www.fsb.org/wp-content/uploads/global-shadow-banking-monitoring-report-2016.pdf

Assessing the global trends and structure of non-bank financial intermediation (5)

Interconnectedness between banks and OFIs

18 jurisdictions and the euro area[1]

Exhibit 3-3



[1] Based on historical data included in jurisdictions' 2016 submissions. Changes in interconnectedness measures in 2011 and 2012 may also reflect improvements in the availability of data over time on a jurisdiction level. Exchange rate effects have been netted out by using a constant exchange rate (from 2015). [2] Banks funding risk = Banks' liabilities to OFIs as a share of bank assets. Banks credit risk = Banks' claims on OFIs as a share of bank assets. [3] OFIs funding risk = OFIs' liabilities to banks as a share of OFI assets. OFIs credit risk = OFIs' claims on banks as a share of OFI assets.

Sources: National sector balance sheet and other data; FSB calculations.

Source: http://www.fsb.org/wp-content/uploads/global-shadow-banking-monitoring-report-2016.pdf

Narrowing-down the focus to non-bank financial entities and activities that pose shadow banking risks (1)

Step 1: Macro-mapping

All non-bank **financial intermediation**
(financial assets based on the sector balance sheet data)

Removing entities that do not engage in credit intermediation

Step 2(a): Credit-focused

All non-bank **credit intermediation**
(credit assets based on sector balance sheet data)

Step 2(b): Risk-focused

Non-bank **credit intermediation with bank-like systemic risks**

FSB shadow banking classification by five economic functions

Source: http://www.financialstabilityboard.org/publications/r_121118c.pdf

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Assessment of non-bank financial entities' involvement in shadow banking activities/risks

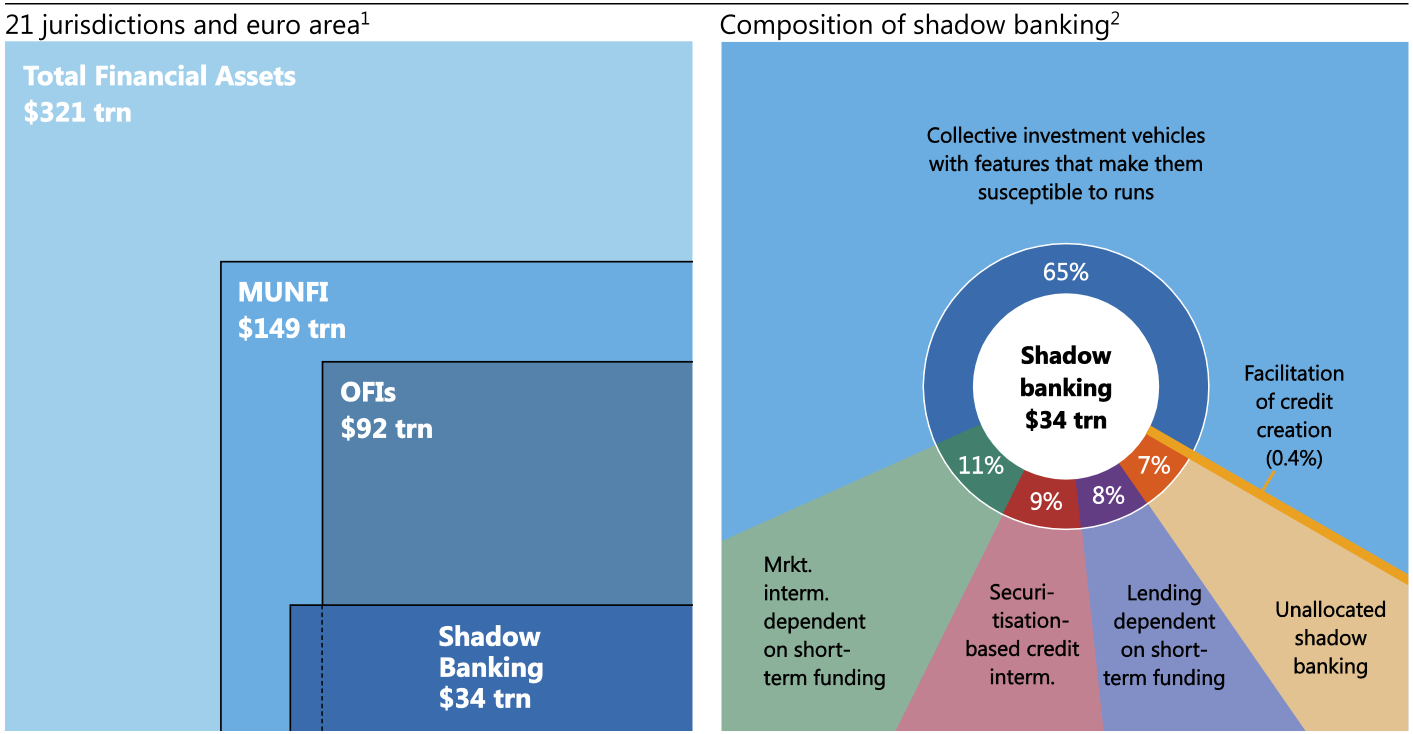
Economic Function	Definitions	Key shadow banking risks
EF1	Management of collective investment vehicles with features that make them susceptible to runs	Public funds: Liquidity and maturity transformation Private funds: Leverage and maturity transformation
EF2	Loan provision that is dependent on short-term funding	Liquidity and maturity transformation, leverage
EF3	Intermediation of market activities that is dependent on short-term funding or on secured funding of client assets	Liquidity and maturity transformation, leverage
EF4	Facilitation of credit creation	Credit risk transfer
EF5	Securitisation-based credit intermediation and funding of financial entities	Liquidity and maturity transformation, leverage

Source: http://www.fsb.org/wp-content/uploads/r_130829c.pdf

Narrowing-down the focus to non-bank financial entities and activities that pose shadow banking risks (2)

Monitoring aggregates

USD trillion at end-2015 | Exhibit 0-1



MUNFI = Monitoring Universe of Non-bank Financial Intermediation, includes OFIs, pension funds, and insurance corporations; OFIs also includes captive financial institutions and money lenders; Shadow banking = narrow measure of shadow banking, net of entities which are prudentially consolidated into banking groups.

[1] The narrow measure of shadow banking is based on data from the 27 jurisdictions, instead of 21 jurisdictions and the euro area, because data from seven participating euro area jurisdictions are more granular than the aggregate euro area data from the European Central Bank (ECB). For 27 jurisdictions, the corresponding aggregates are Total Financial Assets ($304 trillion), MUNFI ($127 trillion) and OFIs ($72 trillion).
[2] For additional details on these categories, please see Section 4.

Sources: National sector balance sheet and other data; FSB calculations.

Source: http://www.fsb.org/wp-content/uploads/global-shadow-banking-monitoring-report-2016.pdf

Narrowing-down the focus to non-bank financial entities and activities that pose shadow banking risks (3)

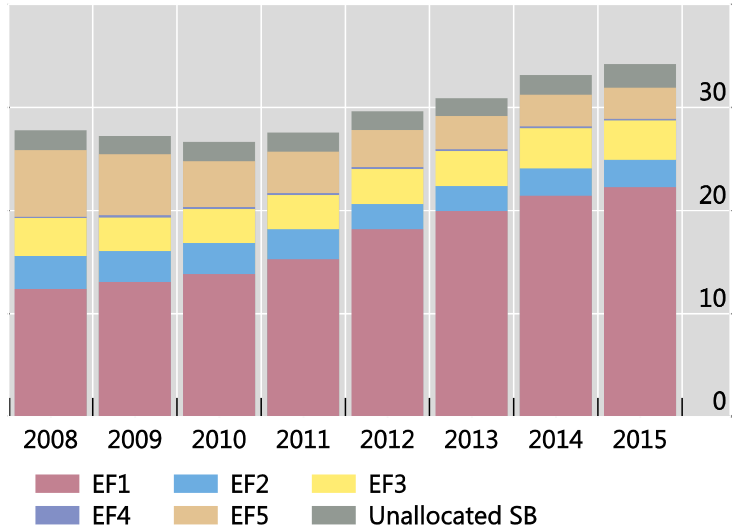
Shadow banking decomposition

27 jurisdictions

Graph 9

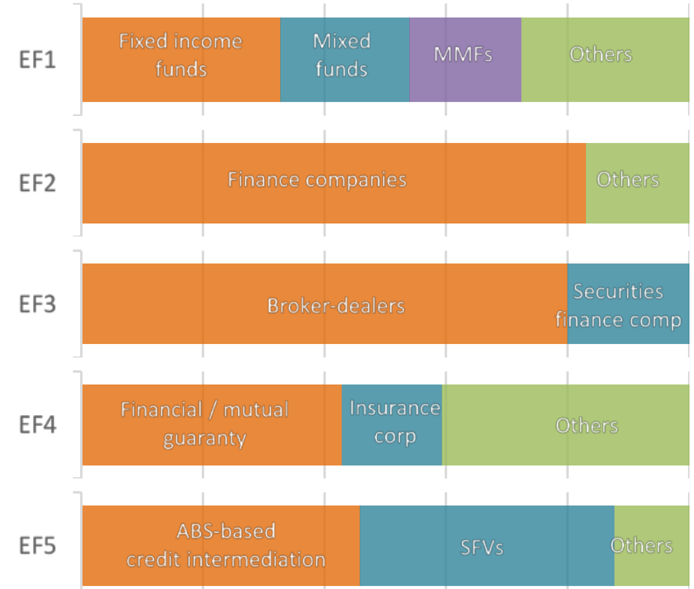
Evolution of shadow banking by economic function

USD trillion



Breakdown by main entity types (at end-2015)

Percent of economic function (of 100%)



Increases in the value of EFs may also reflect improvements in the availability of data over time. Exchange rate effects have been netted out by using a constant exchange rate (from 2015). EF1 = Economic function 1; EF2 = Economic function 2; EF3 = Economic function 3; EF4 = Economic function 4; EF5 = Economic function 5; Unallocated SB = assets of entities that were assessed to be involved in shadow banking activities, but which could not be assigned to a specific economic function.

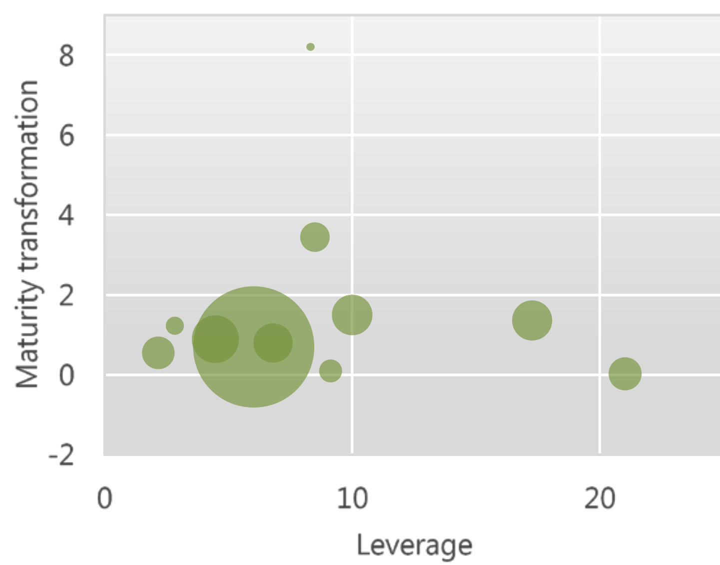
Source: Global Shadow Banking Monitoring Report 2016.

Source: http://www.fsb.org/wp-content/uploads/P300617-1.pdf

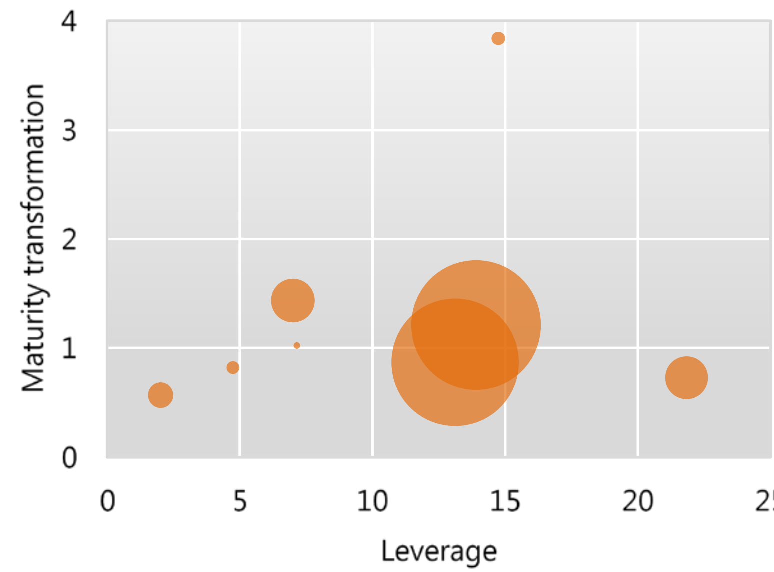
Maturity transformation and leverage[1]

Size of bubble denotes the sector's absolute size; at end-2015 Graph 11

Finance companies



Broker-Dealers



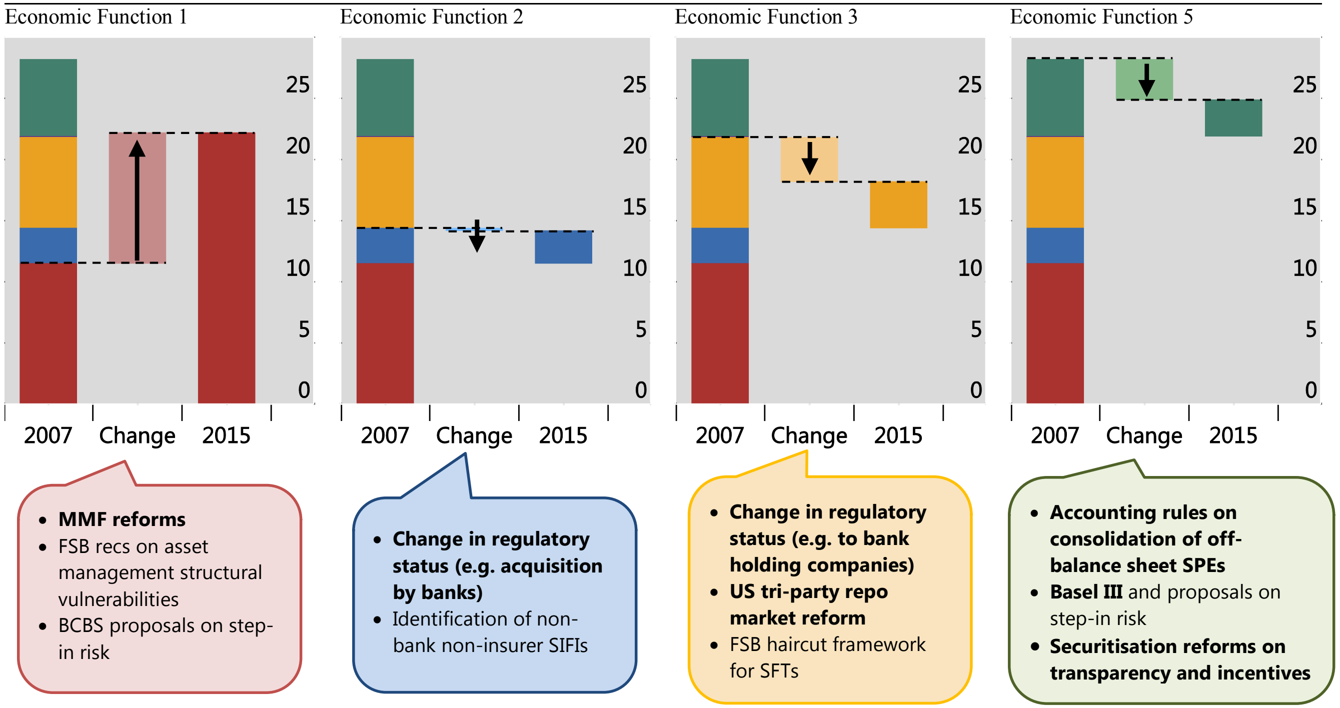
[1] Maturity Transformation = short-term liabilities / short-term assets. Leverage = total financial assets / equity. In some cases, these estimates include assets of entities consolidated into banking groups because some countries' granular data do not distinguish between consolidated and non-consolidated entities. Size of bubble denotes the sector's absolute size.

Source: FSB Global Shadow Banking Monitoring Report 2016.

Addressing financial stability risks from shadow banking

Regulating the evolving system of market-based finance

In trillions of US dollars | Graph 3



Bubbles show examples of policy measures applied to the relevant economic functions since the financial crisis. Additional policy measures may have been introduced at national/regional and international levels. Measures in bold are in force. EF4 was not represented in this graph as it is only 0.4% of total shadow banking assets.

- Securitisation-based credit intermediation (EF5)
- Facilitation of credit intermediation (EF4)
- Market intermediation dependent on short-term funding (EF3)
- Lending dependent on short-term funding (EF2)
- Management of collective investment schemes that are susceptible to runs (EF1)

Source: Adapted from FSB Shadow Banking Monitoring Report 2016.

Source: http://www.fsb.org/wp-content/uploads/P300617-1.pdf

Addressing structural vulnerabilities from asset management activities

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- On 12 January, FSB published **14 policy recommendations to address the following structural vulnerabilities from asset management activities*** that could potentially present financial stability risks:
    1. Liquidity mismatch between fund investments and redemption terms and conditions for open-ended fund units;
    2. Leverage within investment funds;
    3. Operational risk and challenges at asset managers in stressed conditions; and
    4. Securities lending activities of asset managers and funds.
- IOSCO is currently working to operationalise the liquidity recommendations by end-2017 and develop consistent leverage measures by end-2018.
    – In July 2017, IOSCO published consultative documents on the liquidity risk management for collective investment schemes.**
- FSB will regularly review progress in the operationalisation and implementation of the recommendations.

*: http://www.fsb.org/wp-content/uploads/FSB-Policy-Recommendations-on-Asset-Management-Structural-Vulnerabilities.pdf
**: https://www.iosco.org/news/pdf/IOSCONEWS468.pdf

Further enhancing the oversight to prepare for new forms of shadow banking

(i) Enhance system-wide oversight of shadow banking and policy responses to address the identified risks through implementing the recommendations of the 2015-16 Peer Review* through, for example:

- establishing a systematic process for assessing financial stability risks from shadow banking, and ensuring that any entities or activities that could pose material financial stability risks are brought within the regulatory perimeter;
- addressing identified gaps in risk-related data; and
- removing impediments to cooperation and information-sharing between authorities.

(ii) Strengthen the monitoring of shadow banking activity and the data collection framework through:

- improving data granularity on assets and liabilities as well as on cross-border interconnectedness;
- supplementing flow of funds data with supervisory and/or commercially-available data to assess risks; and
- improving information-sharing on emerging risks.

(iii) Complete the remaining policy development at the international level and implement the agreed policy recommendations to reduce risks and arbitrage opportunities across jurisdictions and sectors.

*: http://www.fsb.org/wp-content/uploads/Shadow-banking-peer-review.pdf
Source: http://www.fsb.org/wp-content/uploads/P300617-1.pdf

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